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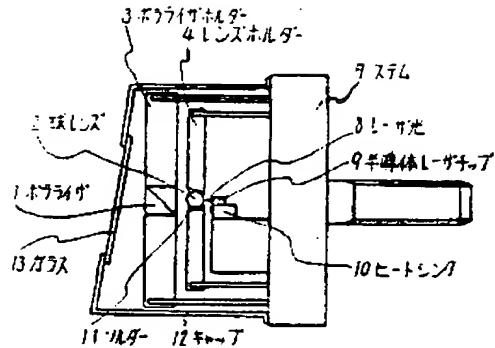
APPLICATION DATE : 25-03-88
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TITLE : SEMICONDUCTOR LASER



ABSTRACT : PURPOSE: To restrain the generation of TM wave as a cause to deteriorate single axial mode, by arranging a lens and a polarizer for parallel beam in front of the emitting surface of a semiconductor laser chip, in the manner in which axial symmetry is maintained.

CONSTITUTION: In front of a semiconductor laser chip 9 fixed to a heat sink 10, a spherical lens 2 fixed to a lens holder 4 with solder 11 is installed in the axially symmetrical manner. These are fixed to a polarizer holder 3 which is arranged in front of the spherical lens in order to restrain the TM wave. The semiconductor laser chip, the spherical lens and a polarizer are sealed by a cap 12 with glass 13, and the polarizer 1 is contained in a package constituted of a cap 12 and a stem 7. Thereby a semiconductor laser having luminous spectrum excellent in single axial mode can be obtained. The spherical lens is arranged in front of the emitting surface of a semiconductor laser chip, in order that a laser light 8 emitted from the semiconductor chip may be turned into a parallel beam, and the optical coupling efficiency with the polarizer or an optical fiber and the like arranged in front of the polarizer may be increased.

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